

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. - 11. (Canceled)

12. (Currently Amended) A plasma generating electrode comprising:

at least two plate-shaped unit electrodes each of which faces each other and configured to generate plasma upon application of a voltage between the unit electrodes, at least one of the unit electrodes each of which faces each other including a plate-shaped ceramic dielectric having a plurality of grooves or a plurality of recesses formed in at least one surface, and

a conductive film embedded within the ceramic dielectric, the plasma generating electrode configured to generate high-density plasma in the vicinity of edges formed by a surface of the ceramic dielectric and side surfaces of the grooves or the recesses upon application of a voltage between the unit electrodes, the high-density plasma having a density higher than that of plasma generated between the unit electrodes in an area other than the vicinity of the ~~edges~~edges, wherein at least one of the two plate-shaped unit electrodes has grooves and/or recesses on both surfaces of the plate-shaped ceramic dielectric.

13. (Previously Presented) The plasma generating electrode according to claim 12, wherein the grooves or the recesses are formed in an area corresponding to 20 to 80% of an area of the surface of the ceramic dielectric, and the surface forms a continuous plane.

14. (Previously Presented) The plasma generating electrode according to claim 12, wherein each of the grooves or the recesses has a thickness from the surface of the ceramic dielectric to a bottom of the groove or the recess of 3 to 200  $\mu\text{m}$ .

15. (Previously Presented) The plasma generating electrode according to claim 12, wherein each of the grooves or the recesses has a thickness from the surface of the ceramic dielectric to a bottom of the groove or the recess of  $1/3$  or less of an average thickness of the ceramic dielectric.

16. (Currently Amended) A plasma reactor comprising:

a plasma generating electrode comprising:

at least two plate-shaped unit electrodes each of which faces each other and configured to generate plasma upon application of a voltage between the unit electrodes, at least one of the unit electrodes each of which faces each other including a plate-shaped ceramic dielectric having a plurality of grooves or a plurality of recesses formed in at least one surface, and

a conductive film embedded within the ceramic dielectric, the plasma generating electrode configured to generate high-density plasma in the vicinity of edges formed by a surface of the ceramic dielectric and side surfaces of the grooves or the recesses upon application of a voltage between the unit electrodes, the high-density plasma having a density higher than that of plasma generated between the unit electrodes in an area other than the vicinity of the edges, and

a casing having a passage (gas passage) for a gas containing a specific component formed therein, wherein, when the gas is introduced into the gas passage of the casing, the specific component contained in the gas is reacted using plasma generated by the plasma generating ~~electrode-electrode~~, wherein at least one of the two plate-shaped unit electrodes has grooves and/or recesses on both surfaces of the plate-shaped ceramic dielectric.

17. (Previously Presented) The plasma reactor according to claim 16, further comprising a pulsed power supply for applying a voltage to the plasma generating electrode.

18. (Previously Presented) The plasma reactor according to claim 17, wherein the pulsed power supply includes at least one SI thyristor.

19.-24. (Canceled)